Technical Service Information 2003

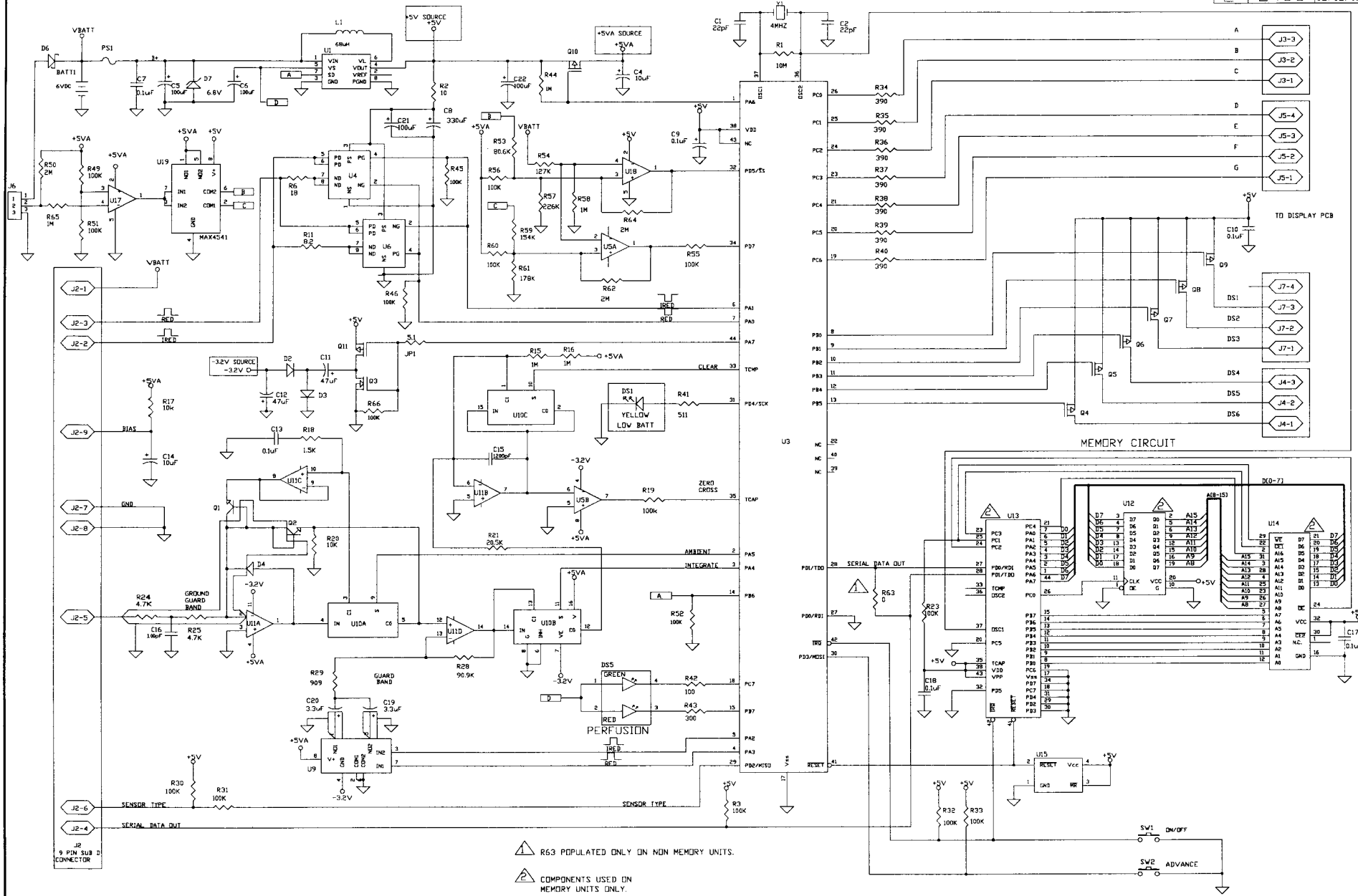
Model 2500

CE 0123

English

P/N 4050-000 Rev A

REV	EN	DATE	ORIG	APPD
C	2371	07/27/01	SKF	KEW
D	2405	09/21/01	SKF	KLL
E	2465	02/12/02	JER	KEW



DRAWN	SKF	DATE	09/02/95
CHKD.	KLH		2-20-02
ENG.	P.I.		08-03-00
ENG.			
MFG.	S.B.		08-04-00
Q.A.	SES		08-09-00

NONIN MEDICAL, INC. MINNEAPOLIS, MN

TOLERANCES UNLESS OTHERWISE SPECIFIED
.X ±.030
.XX ±.010
.XXX ±.005
ANGLES ±1°
DO NOT SCALE DRAWING

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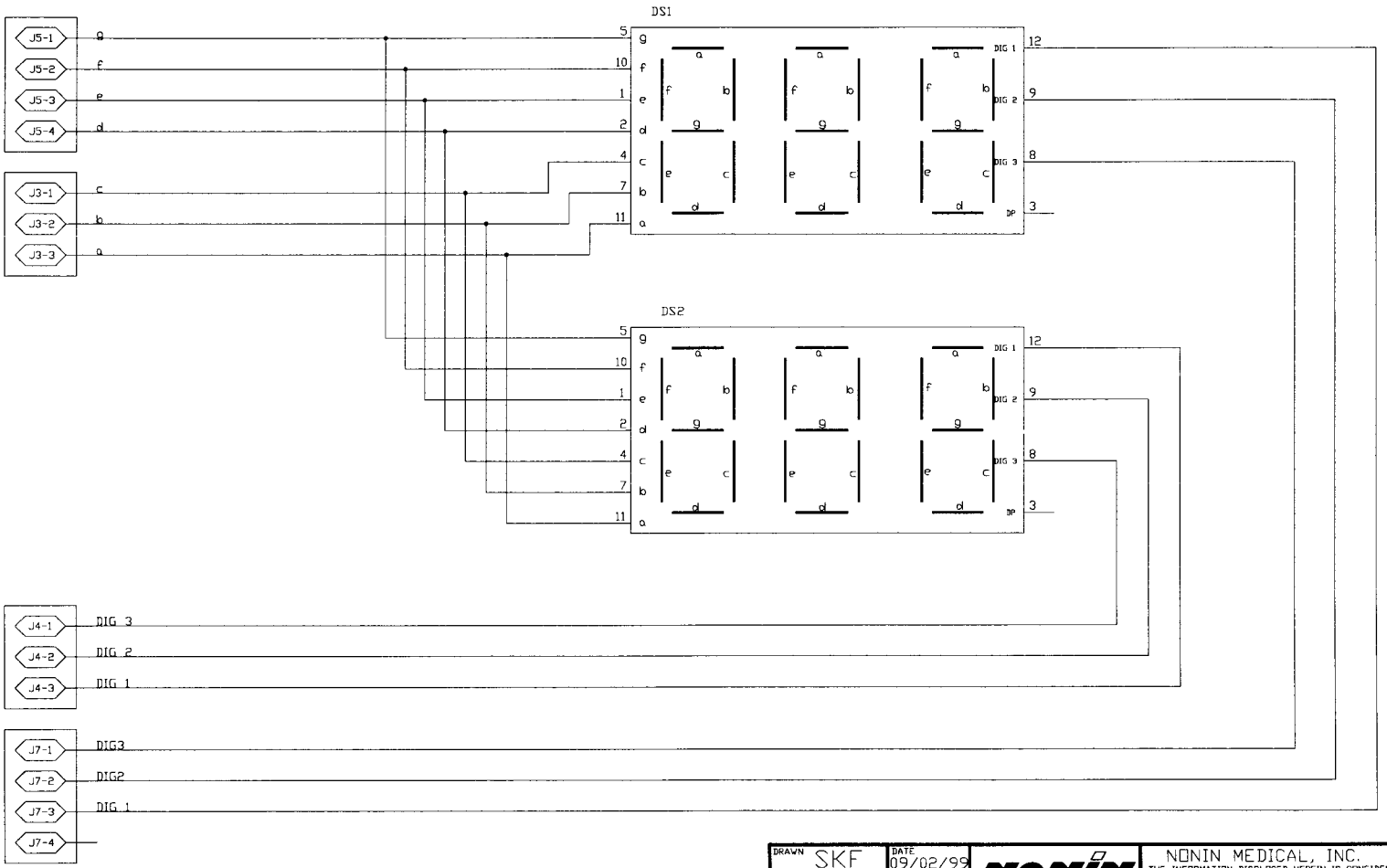
TITLE
2500 W/MEMORY

PART NUMBER
2936-000

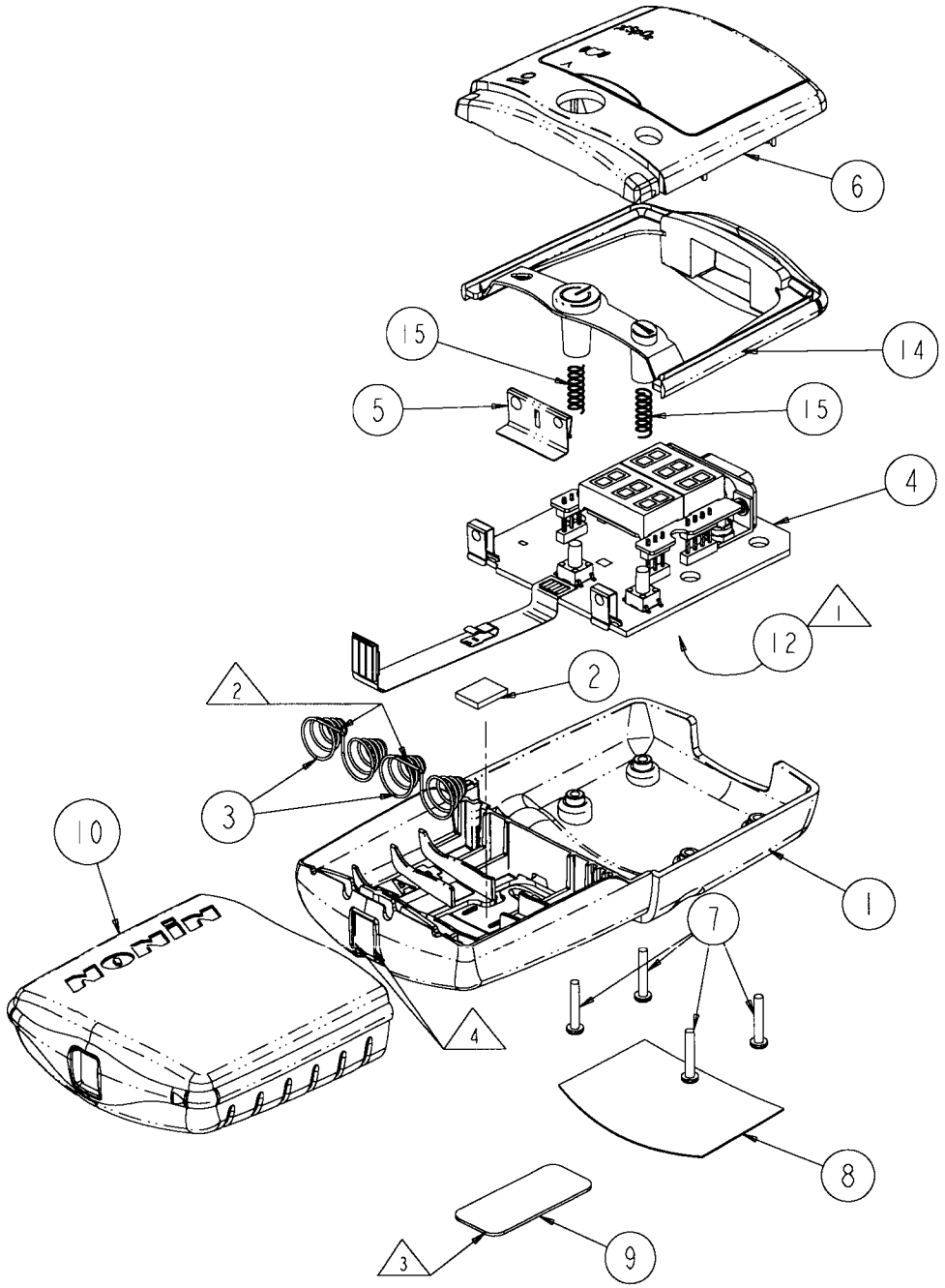
REF 2500
REV E
SHT 1 OF 2

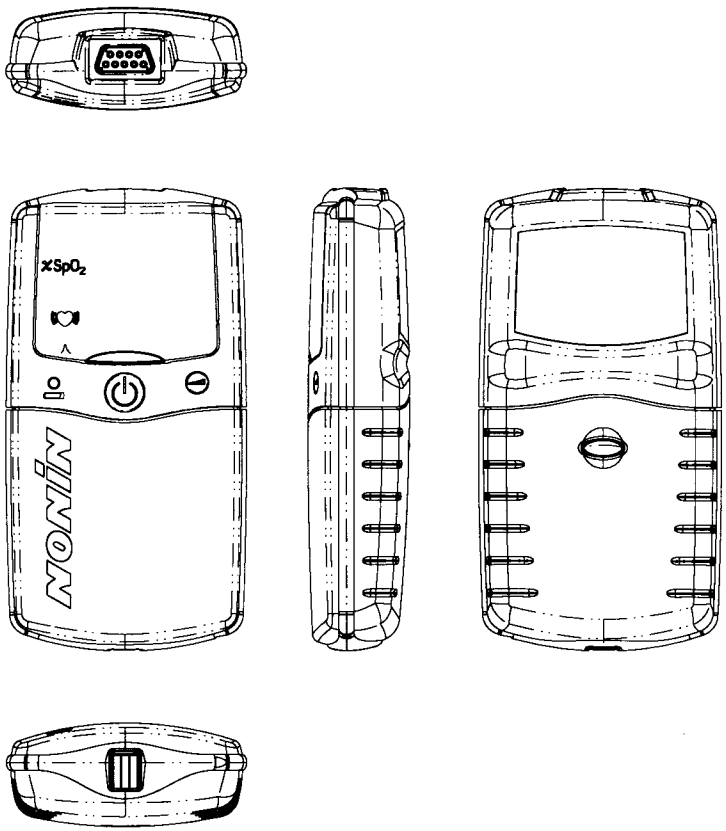
REV	EN	DATE	ORIG	APPD



DRAWN SKF	DATE 09/02/99	NONIN MEDICAL, INC. MINNEAPOLIS, MN	NONIN MEDICAL, INC. CONFIDENTIAL THE INFORMATION DISCLOSED HEREIN IS CONFIDENTIAL AND IS PROPRIETARY TO NONIN MEDICAL, INC. NONIN RESERVES ALL PATENT, PROPRIETARY AND REPRODUCTION RIGHTS THEREIN. THIS INFORMATION IS NOT TO BE USED OR DISCLOSED TO ANY PERSONS WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF A REPRESENTATIVE OF NONIN MEDICAL, INC.
CHKD.			
ENG.		TOLERANCES UNLESS OTHERWISE SPECIFIED .X ±.030 .XX ±.010 .XXX ±.005 ANGLES ±1° DO NOT SCALE DRAWING	TITLE 2500 DISPLAY PART NUMBER 2936-000
ENG.			REF 2500 REV E SHT 2 OF 2
MFG.			
Q.A.			

REV	EN	DATE	ORIG	APPD
F	2531	04/10/02	SKF	KEW
G	2548	04/23/02	TWM	KEW
H	2640	08/01/02	SKF	KEW





NOTES:

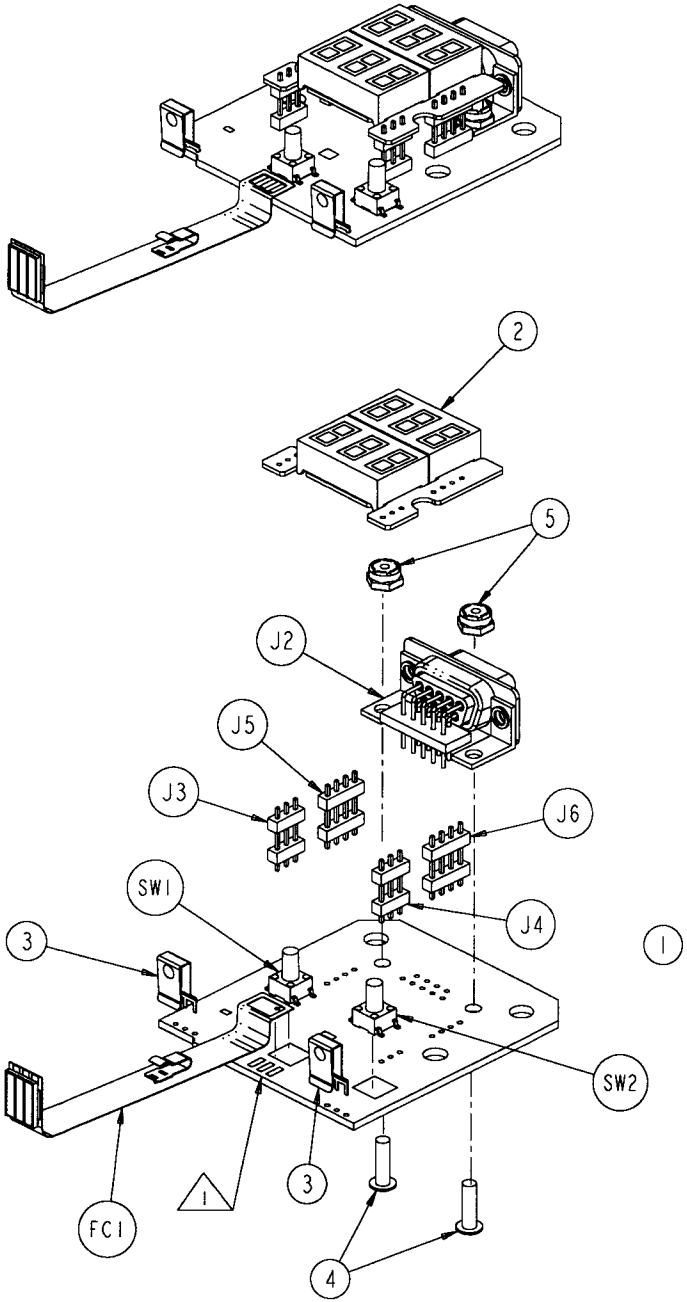
1. APPLY CONFORMAL COATING (ITEM 12) TO BOTTOM SIDE OF PCB ASSEMBLY (ITEM 4).
2. LOCTITE (ITEM 13) APPLICATION SITES.
3. UPPER LEFT CORNER OF LABEL.
4. CYANOACRYLATE APPLICATION SITES.

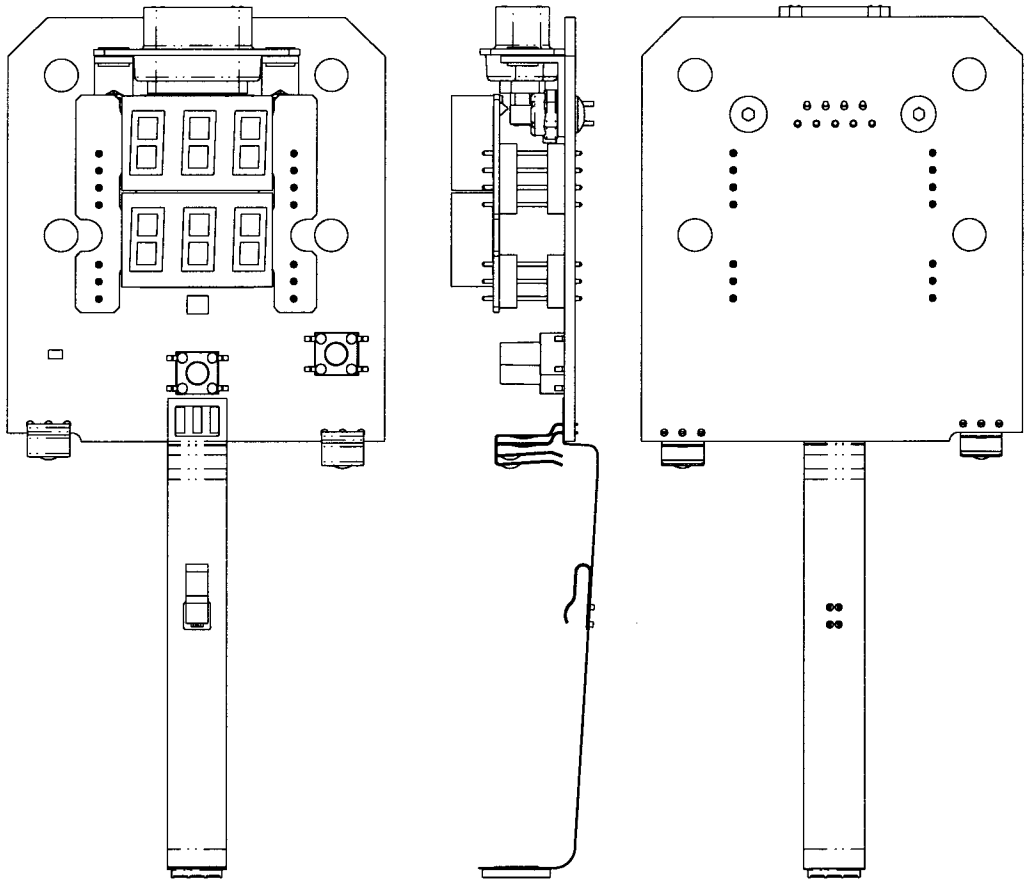
DRAWN DRM	DATE 11/29/99	NONIN MEDICAL, INC.	CONFIDENTIAL
CHKD. KLH 8902		THE INFORMATION DISCLOSED HEREIN IS CONFIDENTIAL AND IS PROPRIETARY TO NONIN MEDICAL, INC. NONIN RESERVES ALL PATENT, PROPRIETARY AND REPRODUCTION RIGHTS THEREIN. THIS INFORMATION IS NOT TO BE USED OR DISCLOSED TO ANY PERSONS WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF A REPRESENTATIVE OF NONIN MEDICAL, INC.	
ENG. PI	10/09/00	TOLERANCES UNLESS OTHERWISE SPECIFIED	TITLE: ASSY, MODEL 2500 FINAL
ENG. -	-	.X ±0.1	REF 2500
MFG. SB	10/09/00	.XX ±0.01	REV H
Q.A. SES	10/09/00	.XXX ±0.005	PART NUMBER: 2989-000
		ANGLES ±1.0°	SHT 1 OF 2
		DO NOT SCALE DRAWING	

BILL OF MATERIAL

ASSY ID	PART NUMBER	DESCRIPTION	UM	QTY
1	3602-000	HOUSING, BACK, 2500	EA.	1
2	0106-340	TAPE, DOUBLE-SIDED ADHESIVE FOAM	EA.	1
3	0593-002	CONTACTS, 8500	EA.	2
4	3778-000	PCB ASSEMBLY, 2500	EA.	1
5	3037-002	CONTACTS, BATTERY, 2500	EA.	1
6	3731-000	HOUSING, FRONT ASSEMBLY (MACHINED)	EA.	1
7	0669-002	SCREW, #2 PLASTITE PAN HEAD PHILLIPS	EA.	4
8	2959-000	LABEL, CAUTION, 2500	EA.	1
9	2960-000	LABEL, SERIAL NUMBER	EA.	1
10	3606-000	HOUSING, BATTERY COVER	EA.	1
11	0165-000	CYANOACRYLATE ADHESIVE, SICOMET 63	AR	-
12	0148-000	CONFORMAL COATING	AR	-
13	3300-000	EPOXY ADHESIVE, LOCTITE E-90FL	AR	-
14	3604-000	HOUSING, GASKET, 2500	EA.	1
15	3911-000	SPRING, COMPRESSION	EA.	2

REV	EN	DATE	ORIG	APPD
G	2371	07/27/01	SKF	KEW
H	2405	09/21/01	SKF	KEW
I	2465	02/12/02	JER	KEW





1 FLEX CIRCUIT ASSY (ITEM FC1) GLUED WITH SCOTCHWELD AND SOLDERED TO PCB (ITEM #1).

DRAWN DRM	DATE 11/23/99	NONIN MEDICAL, INC.	CONFIDENTIAL
CHKD. KLH	2-20-00		
ENG. P.I.	08/03/00	TOLERANCES UNLESS OTHERWISE SPECIFIED: .X ±0.1, .XX ±0.01, .XXX ±0.005, ANGLES ±1.0°	TITLE: ASSY, 2500 PC BOARD
ENG. -	-		REF 2500
MFG. S.B.	08/04/00		REV 1
Q.A. SES	08/03/00	DO NOT SCALE DRAWING	PART NUMBER: 2981-000
			SHT 1 OF 5

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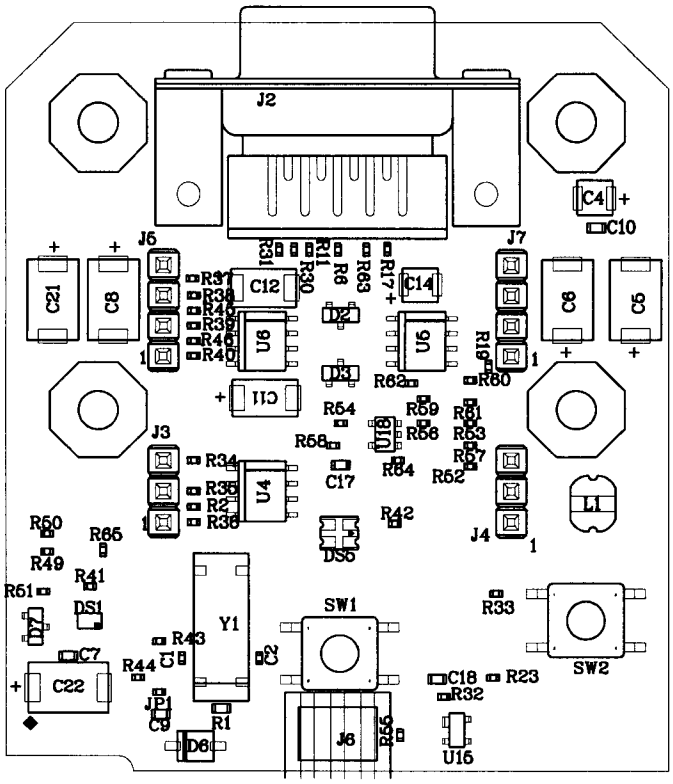
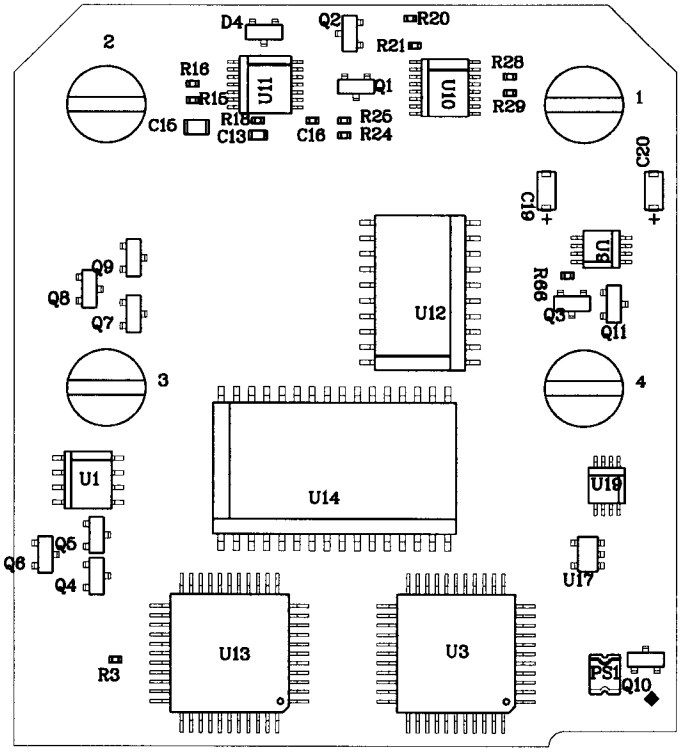


TOP VIEW



BOTTOM VIEW

NONIN® MEDICAL, INC. MINNEAPOLIS, MN	TOLERANCES UNLESS OTHERWISE SPECIFIED .X ± .030 .XX ± .010 .XXX ± .005 ANGLES ± 1° DO NO SCALE DRAWING	TITLE ASSY, 2500 PC BOARD PART NUMBER 2981-000	REF 2500 REV I SHT 2 OF 5

BILL OF MATERIAL

ASSY ID	PART NUMBER	DESCRIPTION	UM	QTY
1	3035-000	PCB, 2500 OXIMETER	EA.	1
U1	2373-000	IC, BOOST REGULATOR, (SON8-150)	EA.	1
U3	3103-000	IC, PROGRAMMED MICRO (44 QFP)	EA.	1
U4,U6	2226-000	IC, COMPL. FET-DUAL ARRAY, (SO-8)	EA.	2
U5	0427-103	IC,JFET OP-AMP PAIR (SO-8)	EA.	1
U9	2946-001	IC,DMOSFET DUEL ANALOG SWITCH (8 PIN uMAX)	EA.	1
U10	2506-000	IC, TRIPLE ANALOG MULTIPLEXER , (QSOP-16)	EA.	1
U11	2239-100	IC, LIN CMOS QUAD OP-AMP, (TSS0P-14)	EA.	1
U12	0290-100	IC, OCTAL LATCH(SOIC-20)	EA.	1
U13	3104-000	IC, PROGRAMMED MICRO (44 QFP)	EA.	1
U14	2352-123 ALT 2352-124 ALT 2352-142 ALT 2352-133 ALT 2352-122	128K MEMORY IC	EA.	1
U15	2507-000	IC, RESET MONITOR, SOT143	EA.	1
U17, U18	2348-001	TINY CMOS COMPARITOR	EA.	2
U19	2241-002	IC, LOW VOLTAGE ANALOG SWITCH	EA.	1
L1	1900-011	INDUCTOR, 68υH, BOBBIN TYPE	EA.	1
Y1	2519-000 ♠1889-000 ♠0568-001	CRYSTAL, HIGH FREQUENCY	EA.	1
Q1,Q2	1148-002	TRANSISTOR, NPN LOW NOISE	EA.	2
Q3	2305-000 ♠2202-000	FET, N-CHANNEL, SOT-23 TRANSISTOR, NPN LOW NOISE	EA.	1
Q4, 5, 6, 7, 8, 9, 11	1894-000	MOSFET, P-CHANNEL (SOT23)	EA.	7
Q10	2215-000 ALT 2215-001 ALT 2215-002	LOW ON-STATE RESISTANCE P-CHANNEL MOSFET (SOT23)	EA.	1
DS1	3145-002	DIODE YELLOW SMD (HP HSMA-S670)	EA.	1
DS5	1899-007	DIODE BICOLOR SMD (CMD11354URG)	EA.	1
D2,D3 D4	0431-000	DIODE, HIGH SPEED SWITCHING, SOT23	EA.	3
D6	1896-000	DIODE SCHOTTKY, SMD (SC802-04)	EA.	1
D7	3080-011	DIODE, ZENER 6.8V	EA.	1
C1, C2	2511-020	CAP, NPO CHIP, 22pF, 50V, 10%. (0402)	EA.	2
C4, C14	1902-073	CAP, TANT. CHIP, 10µF, 10%, 10V, EIA SIZE 3528	EA.	2
C5, C6 C21,C22	1892-009	CAP, LOW ESR TANT. CHIP, 100µF, 10%, 10V, EIA SIZE 7343	EA.	4
C7, C9 C10, C13 C17, C18	2522-029	CAP, X7R CHIP, 0.1µF, 16V, 10%, (0603)	EA.	6
C8	1892-012	CAP, LOW ESR TANT. CHIP, 330µF, 10%, 6.3v, EIA SIZE 7343H	EA.	1

C11, C12	1902-051	CAP, TANT. CHIP, 47µF, 10%, 6.3V, EIA SIZE 6032	EA.	2
C15	1971-037	CAP, NPO CHIP, 1200pF, 10%, 50v, (0805)	EA.	1
C16	2511-036	CAP, MONO CHIP, 10%, 50v, 100pF,(0402)	EA.	1
C19, C20	1902-565	CAP, TANT CHIP, 5%, 35V, 3.3µF, EIA SIZE 3216	EA.	2
R1	2145-169	RESISTOR, 1/16W, 5%, 10M (0603)	EA.	1
R2	2513-025	RESISTOR, 1/16W, 5% 10 OHM (0402)	EA.	1
R6	2513-007	RESISTOR, 1/16W, 5%, 18 OHM(0402)	EA.	1
R11	2513-223	RESISTOR,1/16W, 5%, 8.2 OHM (0402)	EA.	1
R15, R16, R44, R58, R65	2512-481	RESISTOR, 1/16W, 1%, 1M (0402)	EA.	5
R17, R20	2513-073	RESISTOR. 1/16W, 5%, 10K (0402)	EA.	2
R18	2513-053	RESISTOR,1/16W, 5%, 1.5 K (0402)	EA.	1
R3, R19, R23 R30, R31 R32, R33 R45, R46 R49, R51 R52, R55 R56, R60, R66	2512-385	RESISTOR, 1/16W, 1%, 100K(0402)	EA.	16
R21	2512-319	RESISTOR,1/16W, 1%, 20.5 K (0402)	EA.	1
R24,R25	2513-065	RESISTOR,1/16W, 5%, 4.7 K (0402)	EA.	2
R28	2512-381	RESISTOR,1/16W, 1%, 90.9 K (0402)	EA.	1
R29	2512-189	RESISTOR,1/16W, 1%, 909 OHM (0402)	EA.	1
R34, R35 R36, R37 R38, R39 R40	2513-039	RESISTOR,1/16W, 5%, 390 OHM (0402)	EA.	7
R41	2512-165	RESISTOR, 1/16W, 1%, 511 OHM (0402)		1
R42	2513-025	RESISTOR,1/16W, 5%, 100 OHM (0402)		1
R43	2513-036	RESISTOR,1/16W, 5%, 300 OHM (0402)	EA.	1
R50, R62 R64	2513-128	RESISTOR, 1/16W, 5%, 2M (0402)	EA.	3
R53	2512-376	RESISTOR, 1/16W, 1%, 80.6K (0402)	EA	1
R54	2512-395	RESISTOR, 1/16W, 1%, 127K (0402)	EA.	1
R57	2512-419	RESISTOR, 1/16W, 1%, 226K (0402)	EA.	1
R59	2512-403	RESISTOR, 1/16W, 1%, 154K (0402)	EA.	1
R61	2512-409	RESISTOR, 1/16W, 1%, 178K (0402)	EA.	1
R63	2513-000	RESISTOR, 1/16W, 5% 0 OHM	EA.	1
JP1	2513-049	RESISTOR,1/16W, 5%, 5.1 OHM (0402)	EA.	1
SW1,SW2	3078-001	SWITCH, TACT PUSH BUTTON	EA.	2
J2	1725-000	9 PIN SUB-D CONNECTOR	EA.	1
J3, J4	3077-003	HEADER 3 PIN	EA.	2
J5, J7	3077-004	HEADER 4 PIN	EA.	2
FC1	3074-000	FLEX CIRCUIT ASSY	EA.	1
2	3021-000	DISPLAY, 7 SEGMENT ASSY	EA	1
3	3037-001	CONTACT, BATTERY	EA.	2

4	1519-000	SCREW, SOCKET BUTTON CAP	EA.	2
5	1520-000	NUT, NYLON INSERT STOP	EA.	2
-	♣0148-000	HUMISEAL	A.R.	
-	2459-000	EPOXY, SCOTCH-WELD-DP110, GRAY	A.R	

REF	2936-000	SCHEMATIC, 2500	REF	
PS1	2538-000	POLYSWITCH, SMD	EA	1

♠ - Use as alternate components.

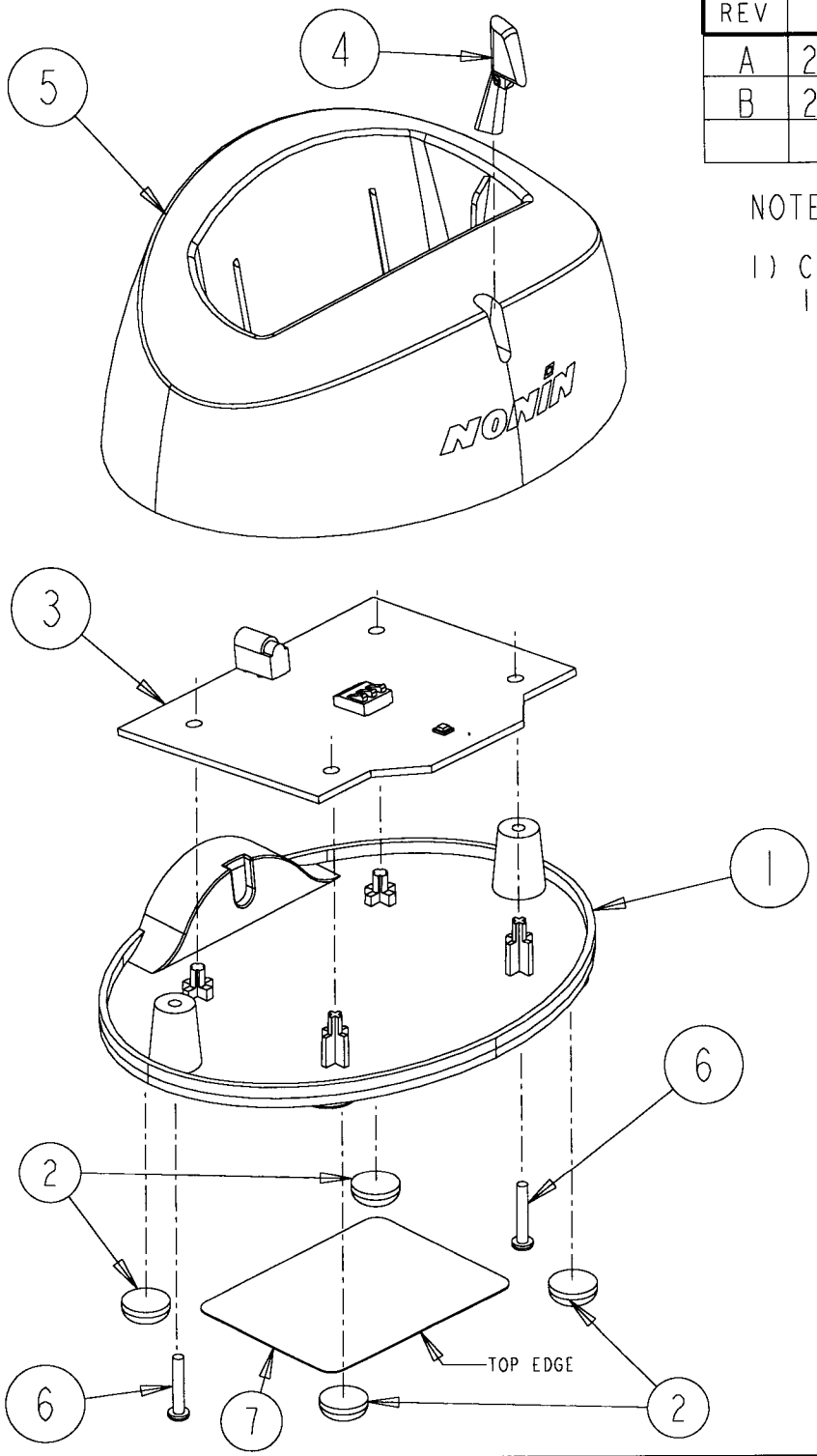
♣ - Humiseal is applied to board after passing test #3098-000

NONIN MEDICAL, INC. MINNEAPOLIS, MN	TITLE 2500 PCB ASSY.	REF 2500 REV I
	PART NUMBER 2981-000	SHT 5 OF 5

REV	EN	DATE	ORIG	APPD
A	2112	08/02/00	SKF	KLL
B	2325	06/07/01	JER	KEW

NOTES:

1) CENTER SERIAL NUMBER LABEL ITEM#7 ON BOTTOM OF ITEM #1.



DRAWN KEW	DATE 08/30/99
CHKD. KLL	04/21/01
ENG. PI	08/03/00
ENG. -	-
MFG. SB	08/04/00
Q.A. SES	08/09/00

NONIN MEDICAL, INC. MINNEAPOLIS, MN

TOLERANCES UNLESS OTHERWISE SPECIFIED
.X ± 0.1
.XX ± 0.01
.XXX ± 0.001
ANGLES ± 0.5°
DO NOT SCALE DRAWING

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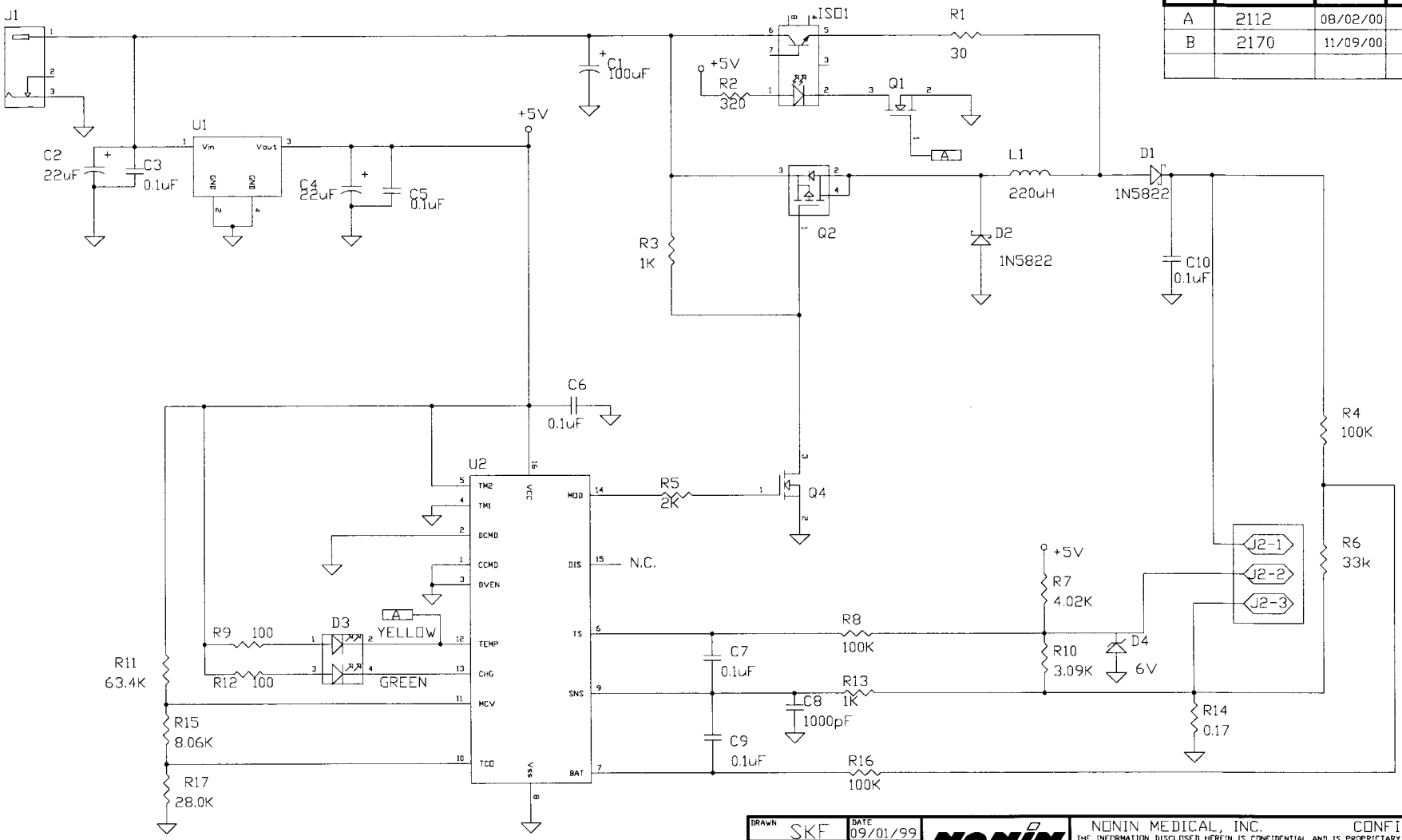
TITLE
FINAL ASSEMBLY, CHARGER STAND

PART NUMBER
3031-000

REF 2500C
REV B
SHT 1 OF 2

BILL OF MATERIAL

ASSY ID	PART NUMBER	DESCRIPTION	UM	QTY
1	3029-002	BOTTOM ENCLOSURE, CHARGER STAND	EA.	1
2	2012-002	SOFT PLASTIC FEET	EA.	4
3	2988-000	PCB ASSEMBLY, CHARGER STAND	EA.	1
4	3030-000	LIGHT PIPE, CHARGER STAND	EA.	1
5	3029-001	TOP ENCLOSURE, CHARGER STAND	EA.	1
6	0669-006	SCREW, THREAD FORMING, #2 X 3/8″ PLASTITE	EA.	2
7	3158-000	SERIAL LABEL, CHARGING STAND	EA	1



REV	EN	DATE	ORIG	APPD
A	2112	08/02/00	SKF	KLL
B	2170	11/09/00	TDA	KLL

DRAWN	SKF	09/01/99
CHKD.	KLW	11/09/00
ENG.	P.I.	08/03/00
ENG.		
MFG.	S.B.	08/04/00
Q.A.	SES	08/04/00

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TITLE
Ni-MH FAST CHARGER

PART NUMBER
2935-000

REF 2500

REV B

SHT 1 OF1

NONIN Pulse Oximeter—PalmSAT™ Model 2500

Common Replacement Parts

August, 2002

Part	Part Number	USD Price
Top Cover	3731-000	25.35
Gasket	3604-000	15.00
Battery Cover	3606-000	11.75
Label, Back Cover	2959-000	1.60
Battery Contact	3037-002	4.65
7-Segment Display	3021-000	28.80
Adult Reusable Finger Clip Sensor	8000AA	165.00

* Current prices are subject to future change.